

REMARKS

Claims 1-28 are now pending in the present application.

In the last Office Action of parent Application Serial No. 08/924,655, the outstanding claims were rejected under 35 U.S.C § 103(a) as being unpatentable over Shaughnessy (U.S. Patent No. 5,724,648) in view of Grube (U.S. Patent No. 5,473,605). Applicant submits that claims 1-28 of the present application are patentably distinguishable from Shaughnessy and Grube, even if combinable.

Shaughnessy discloses a method for facilitating talkgroup communication across a peer-to-peer communication network (column 2, lines 1-6). In particular, a communication system 100 includes communication systems 101, 102 connected via communication links 107, 108 and an inter-system network 104, which may be a point-to-point mesh, a circuit switched network or a packet switched network and is coupled to a home location register (HLR) 106 (column 3, lines 1-10). The HLR 106 includes records relating the attribute and location information for each communication unit and talkgroup records (column 3, lines 11-14). Each communication system includes a plurality of communication location areas 112, 113 and is coupled to a visiting location register (VLR) 114 that contains talkgroup records for each communication system (column 3, lines 15-18). When a communication unit 122 moves between communication location areas and communication systems, a system controller for the system updates the VLR based on information from the communication unit (column 3, lines 19-29).

The talkgroup record in the HLR consists of the talkgroup ID and the communication systems (e.g., 101, 102) at which at least one member of the talkgroup is registered (see Fig. 2 and column 3, lines 30-42). The talkgroup record of the VLR consists of the talkgroup ID (see Fig. 3, #302), and the location areas (e.g., 112, 113) at which at least one member of the talk group is currently registered (see Fig. 3, #304-306), with each location area including a list of communication unit IDs that are currently registered at the location area (see Fig. 3, #310) (column 3, lines 44-55). In other embodiments, the system 100 can include an HLR with all of the information of the VLR but having no VLRs, or alternatively can include

VLRs with all of the information of the HLR but having no HLR (column 3, line 63 – column 4, line 11).

Thus, with the database system of the HLR and VLR (either distributed or combined in one), it is possible to identify each communication system (e.g., 101, 102) having at least one communication unit of a particular talkgroup, each location area (e.g., 112, 113) in the identified communication systems having at least one communication unit, and the IDs of each communication unit in each identified location area. In other words, with the talkgroup ID, it is possible to identify the communication system and location area of each communication unit in the talkgroup.

Further, as disclosed by Shaughnessy, it is possible to update the database to reflect any change in the location of the communication unit. For example, assume a talkgroup 1 has two communication units A and B, with unit A in area 112 of system 101 and unit B in area 117 of system 102. At this point, the HLR would identify systems 101 and 102 as being in talkgroup 1 because each system has a member of talkgroup 1 therein. In addition, the record of talkgroup 1 in the VLRs of systems 101 and 102 would identify area 113 of system 101 as having unit A and area 117 of system 102 as having unit B.

If unit A moves to area 117, the HLR is updated to show that only system 102 has members of talkgroup 1. Similarly, the VLRs are updated to show area 117 of system 102 has units A and B. At the same time, the record that previously showed area 113 of system 101 as having unit A is either deleted, or the listing of units in area 113 becomes a nullity.

According to Shaughnessy, upon receipt of a talkgroup call request, the system controller accesses the VLR database to determine which location areas contain members of the talkgroup, and the talkgroup call is initiated at each communication system where the talkgroup is registered (presumably from reference to the HLR) (see column 5, lines 50-57). While the call is active, the system controller determines whether the talkgroup registration information (i.e., the information in the VLR and HLR) has changed (column 5, lines 57-62). If it has changed, the system controller adjusts the assignment of communication resources to the communication systems in which the members of the talkgroup are present (column 5,

line 62 – column 6, line 6). For example, if communication systems 101 and 102 initially have members of the talkgroup, and the members in system 101 move to system 102, then the system controller removes the communication resources assigned to system 101 for the talkgroup call.

Thus, in the system of Shaughnessy, the database of the VLR and HLR identifies the locations of communication units in a particular talkgroup and is used by the system controller to determine how to assign communication resources when a talkgroup call is initiated. Further, when a communication unit enters a new communication system, it sends its unit ID and talkgroup ID to the system controller to update the database of the VLR and HLR (column 4, lines 48-67).

Claim 1 recites that group communication system comprises, *inter alia*, a control station or base station comprising means for controlling a group communication number which is under communication via any of said base and control stations, the group communication number being an identification number for a group communication made up of a group of mobile stations from among said plurality of mobile stations, wherein in response to receiving a group communication number transmitted together with a location registration signal from a mobile station, the control station or the base station examines the presence or absence of a call based on the group communication number and a group number controlling register that identifies which group communication calls are active, the mobile station being notified when a relevant group communication call is present so that the mobile station receiving the notification is allowed to participate in the group communication through a calling procedure based on the group number, automatically or through operation by a user of the mobile station.

In contrast to claim 1, Shaughnessy fails to disclose or suggest that a control or base station examines the presence or absence of a call based on a group communication number received from a mobile station and a group number controlling register that identifies which group communication calls are active, the mobile station being notified when a relevant group communication call is present so that the mobile station receiving the notification is allowed to participate in the group communication. Rather, Shaughnessy discloses that the VLR and

HLR databases are updated in response to the reception of a talkgroup ID from a communication unit, but nothing in Shaughnessy disclose or suggests determining the presence or absence of a group communication based on the group communication number (even if equated to the talkgroup ID) and group number controlling register that identifies which group communication calls are active.

In fact, Shaughnessy fails to disclose or suggest any register or storage mechanism that identifies which group communication calls are active. The failure to disclose or suggest such a register or storage is consistent with the admitted failure of Shaughnessy to disclose or suggest notifying the mobile station of the presence of a group communication call, as recited in claim 1. In other words, since Shaughnessy does not disclose or suggest any register or storage mechanism that identifies which group communication calls are active, there is no way for Shaughnessy to notify a mobile unit if a particular group communication is active.

Even if arguably combinable, Grube fails to cure the deficiencies of Shaughnessy. Like Shaughnessy, Grube fails to disclose or suggest that a control or base station examines the presence or absence of a call based on a group communication number received from a mobile station and a group number controlling register that identifies which group communication calls are active. Accordingly, even if combinable, claim 1 is patentably distinguishable from the combination of Grube and Shaughnessy. Claims 2-8 are patentably distinguishable from the combination of Grube and Shaughnessy by virtue of their dependence from claim 1, as well as their additional recitations.

Claim 9 is patentably distinguishable from the combination of Grube and Shaughnessy for at least the same reasons as claim 1.

Claims 10 and 19 are also patentably distinguishable from the combination of Grube and Shaughnessy for at least the same reasons as claim 1.

In addition, claims 11-18 and 20-28 are patentably distinguishable from the combination of Grube and Shaughnessy by virtue of their dependence from claims 10 and 19, respectively, as well as their additional recitations. For example, claim 24 recites that a control station comprises a mobile station controlling register that includes identification

numbers of registered mobile stations, and claim 26, depending from claim 24, recites that the control station further comprises a switch module enabling communication between the mobile station that sent the location registration signal and a different mobile station that is not a member of the group communication of the mobile station that sent the location registration signal. In other words, it is possible for a mobile station to be part of a group communication with other mobile station in the group by virtue of the group number controlling register, and it is possible for a mobile station to communicate with another mobile station that is not part of the group communication by virtue of the mobile station controlling register. Neither Shaughnessy nor Grube disclose or suggest such a capability of group communication and communication between mobile stations of different groups.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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